

DOCUMENT RESUME

ED 080 838

CE 000 051

AUTHOR Dubin, Robert; Champoux, Joseph E.  
TITLE Workers' Central Life Interests and Job  
Performance.  
INSTITUTION California Univ., Irvine. Graduate School of  
Administration.  
SPONS AGENCY Office of Naval Research, Washington, D.C. Personnel  
and Training Research Programs Office.  
REPORT NO TR-21  
PUB DATE Aug 73  
NOTE 22p.  
EDRS PRICE MF-\$0.65 HC-\$3.29  
DESCRIPTORS Aspiration; \*Employee Attitudes; Employer Attitudes;  
Employer Employee Relationship; \*Industrial  
Personnel; Job Satisfaction; \*Self Concept;  
\*Supervisors  
IDENTIFIERS \*Central Life Interest (CLI)

ABSTRACT

Supervisors' ratings of individual industrial workers appear to be related to the central life interests (CLI) of the workers. The group of workers who had a job-oriented CLI received the highest ratings from their supervisors among the three CLI groups on Initiative and Application, Cooperation and Quantity of Work and were rated low on Adaptability. The reverse pattern held for workers with a non-job CLI. Implications of these findings are discussed for their utility in interpreting supervisors' orientations in making performance evaluations, as they relate to the characteristics of employees and the characteristics of the rating system. (Author)

ED 080838

U

# WORKERS' CENTRAL LIFE INTERESTS AND JOB PERFORMANCE

ROBERT DUBIN

JOSEPH E. CHAMPOUX

U.S. DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
NATIONAL INSTITUTE OF  
EDUCATION

THIS DOCUMENT HAS BEEN REPRO-  
DUCED EXACTLY AS RECEIVED FROM  
THE PERSON OR ORGANIZATION ORIGIN-  
ATING IT. POINTS OF VIEW OR OPINIONS  
STATED DO NOT NECESSARILY REPRESENT  
OFFICIAL NATIONAL INSTITUTE OF  
EDUCATION POSITION OR POLICY.

Technical Report No. 21

August, 1973

## INDIVIDUAL-ORGANIZATIONAL LINKAGES

Project Directors

Robert Dubin

Lyman W. Porter

*University of California  
Irvine, California 92664*

Prepared under ONR Contract N00014-69-A-0200-9001

NR Number 151-315

*Distribution of this document is unlimited.  
Reproduction in whole or in part is permitted  
for any purpose of the United States Government.*

CE 000 051

UNCLASSIFIED

Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author) University of California Graduate School of Administration Irvine, California		2a. REPORT SECURITY CLASSIFICATION Unclassified	
		2b. GROUP	
3. REPORT TITLE WORKERS' CENTRAL LIFE INTERESTS AND JOB PERFORMANCE			
4. DESCRIPTIVE NOTES (Type of report and, inclusive dates) Scientific Report # 21			
5. AUTHOR(S) (First name, middle initial, last name) Robert Dubin and Joseph E. Champoux			
6. REPORT DATE August 1973		7a. TOTAL NO. OF PAGES 14	7b. NO. OF REFS 9
8a. CONTRACT OR GRANT NO. N00014-69-A-0200-9001 NR 151-315		9a. ORIGINATOR'S REPORT NUMBER(S) Technical Report #21	
b. PROJECT NO.		9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report) None	
c.			
d.			
10. DISTRIBUTION STATEMENT Distribution of the document is unlimited. Reproduction in whole or in part is permitted for any purpose of the United States Government.			
11. SUPPLEMENTARY NOTES		12. SPONSORING MILITARY ACTIVITY Personnel and Training Research Programs Office, Office of Naval Research	
13. ABSTRACT Supervisor's ratings of individual workers appear to be related to the central life interests (CLI) of the workers. The group of workers who had a job-oriented CLI received the highest ratings from their supervisors among the three CLI groups on Initiative and Application, Cooperation, and Quantity of Work and were rated low on Adaptability. The reverse pattern held for workers with a non-job CLI. Implications of these findings are discussed for their utility in interpreting supervisor's orientations in making performance evaluations, as they relate to the characteristics of employees and the characteristics of the rating system.			



14 KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Central Life Interests						
Job Performance						
Employee Evaluation						
Performance Evaluation						
Workers' Job Orientation						
Workers' Non-Job Orientation						

## WORKERS' CENTRAL LIFE INTERESTS AND JOB PERFORMANCE

Robert Dubin and Joseph E. Champoux<sup>1</sup>

University of California-Irvine

It is traditional and even ritualistic to evaluate job performance in industry. In more elaborate systems of personnel administration, rating forms are employed by which supervisors rate employees on a number of dimensions and then apprise the individuals of their ratings as one basis for reinforcing good features of performance and calling attention to areas requiring improvement. This serves to objectify bureaucratic administration by focusing on performance and its authoritative evaluation (Weber, 1947).

Once an individual has passed the probationary period of employment, and has demonstrated a minimum level of competence to become a permanent employee, the functions of performance evaluation become uncertain. In the vast majority of instances scores on performance evaluation cluster around mean values well above minimally acceptable points. Most employees rate acceptable, a few sub-standard, and a few more are rated as star performers. What then becomes the meaning and function of performance evaluation? Is it a way of reinforcing the notion that supervisors are indeed supervising and observing performance ("we do keep an eye on you as an individual even if we have thousands of other employees"); a way of reinforcing the notion that standards are operative and expected to apply to all who continue to work for the organization; or perhaps a communication channel to provide fixed and routine insurance that each supervisor will periodically engage in some feedback to his subordinates as individuals? Certainly evaluation of job performance serves all of these functions, and perhaps others as well.

When all is said and done it is perfectly clear that only two small

groups of employees are really affected by their performance ratings: those who rate well below average and whose future with the organization may be in jeopardy; and those who have high ratings with potentially rosy prospects for their employment future. The bulk of employees who rate in the satisfactory range simply know that they are safely hidden from extraordinary attention until otherwise rated.

There then arises a critical question: if regression toward some mean rating value is so characteristic, what are the grounds on which supervisors draw their distinctions, insofar as any become evident? Is it possible to detect anything about supervisory ratings of employee performance that tells us something about supervisor's orientations; about the employees they are rating; or about the rating system employed? These are the descriptive questions to which this study is directed.

#### The Study

In the course of a larger study of employees of a telephone company, measures were secured from plant department employees of their Central Life Interests (CLI). It has previously been shown for this same group of workers that there is a relationship between CLI and job satisfaction, such that workers with a CLI in work are more satisfied with their jobs than those with a non-job CLI, while those with no preference in CLI fall almost midway between these two groups in job satisfaction (Dubin, Champoux, and Stampfl, 1973). Since individuals with work as a CLI see work as the central institutions of their lives, it seemed probable that their level of job satisfaction and their behavior at work would be noticeably distinctive, and that such demeanor and behavior could be observed and perhaps even appreciated by supervisors when making employee ratings. It seemed worthwhile to explore this possibility.

The data on the basis of which CLI was measured were secured directly from each employee through a standard questionnaire. The employee performance ratings were made independently, and at a different time, by supervisors all utilizing the same company rating form. The performance ratings were accomplished at the routine time required by the company rules and were, therefore, in no way generated by or related to the study of the company.

#### Method

##### Data Collection

The central life interests of employees of the Plant Division of a western telephone company were measured in a study of work attitudes conducted in the first half of 1971. The sample consisted of females who held non-supervisory clerical jobs and males who held a variety of blue-collar jobs concerned with the installation and maintenance of telephone equipment.

All employees of the division were informed through company channels of the general nature of the study and encouraged to participate. It was made clear to them that their participation was voluntary. All attitude data were obtained in small group sessions on company premises during regular working hours. Performance data were obtained from company records for each individual who participated in the study.

##### Central Life Interests

An individual's central life interest was assessed with the Central Life Interest (CLI) questionnaire developed by Dubin (1956). The CLI questionnaire measures a person's central life interest by describing a behavior and asking for the setting in which it is preferred to enact the behavior. A respondent is presented with a specific behavior and three alternative settings for the occurrence of the behavior. One alternative specifies the work setting,

another specifies some setting away from work, and the third indicates no preference as to the setting of the behavior. Accordingly, each of the alternatives to an item is considered to be a job, non-job, or no preference response (i.e., no locale preference).

The questionnaire contained 32 items covering behaviors dealing with membership in formal organization, technological aspects of the environment, informal personal relations, and general everyday experiences. The job, non-job, and no preference alternatives to each of the items were randomly ordered throughout the questionnaire.

In earlier work with the CLI, an individual's responses were examined to determine whether or not he could be scored job-oriented. If an individual could not be scored job-oriented, he was assigned to the non-job-oriented category. The scoring procedure was altered in a recent study (Dubin and Champoux, 1973) to allow an individual to be explicitly scored job-oriented or non-job-oriented. Anyone who could not be clearly placed in one of these categories was considered to have no clear preference for either of these two sectors as a central life interest. This modified scoring procedure was also used in the present study.

A subject was scored job-oriented if he chose at least one-half or 16 job-oriented responses to the 32 items in the questionnaire. Alternatively, a subject was scored job-oriented if a total of seventy percent or 22 job-oriented and no preference alternatives were chosen with a minimum of forty percent or 13 of his total responses being job-oriented.

Comparable criteria were used to score an individual non-job-oriented. A subject was considered to be non-job-oriented if he chose at least one-half or 16 non-job-oriented responses. Alternatively, a subject was scored

non-job-oriented if a total of seventy percent or 22 non-job-oriented and no preference alternatives were chosen with a minimum of forty percent or 13 of his total responses being non-job-oriented.

If a subject could not be scored job-oriented or non-job-oriented, he was scored as having no preference in his central life interest.

#### Performance Data

Individual performance data were obtained from company records. These data were taken from performance evaluation forms used by the company in its annual performance evaluation of all employees. All performance evaluations used in this study were conducted after the central life interests data were collected.

The performance evaluation forms were completed by the individual's immediate supervisor. The evaluations were made for each of 11 aspects of performance as well as overall performance. Each performance item was scored on either a three or five point ordinal scale by the supervisor. Several forms of the rating scales were employed so that on a few items either a three point or a five point scale was utilized. In such instances, the end points of the two scales were equated, as were the mid points. The two end points were arbitrarily valued 1 (low end) and 5 (high end) with the intermediate points appropriately scored. These values were employed in the analysis. One performance evaluation scale was excluded from the analysis since it had not been consistently used by all supervisors. The overall performance evaluation was also eliminated since our main concern was with individual aspects of performance. The ten scales retained for the analysis are listed in Table 1.

Complete central life interests measures and performance data were obtained in 1971 for 211 Blue-Collar Males and 89 Clerical Females.

### Data Analysis

The central life interests and performance data were submitted to a multiple discriminant analysis using the procedure described by Overall and Klett (1972). The multiple discriminant analysis was performed (1) to provide an overall test of the significance of the relationship between central life interests and job performance (Cramer & Bock, 1966), and (2) to identify the performance scales that were most important in differentiating among workers with different central life interest.

### Results

Two discriminant functions were computed for each sample. Only the first discriminant function for the Blue-Collar Males was statistically significant ( $p < .02$ ).

The coefficients of the first discriminant function for each performance evaluation scale are shown in Table 1.

-----

Insert Table 1 About Here

-----

Coefficients are shown for each sample rank ordered from largest to smallest based on the absolute value of the coefficients for each performance scale.

Adaptability, Initiative and Application, and Cooperation mainly define the one discriminant function for the Blue-Collar Males. Quantity of Work also contributes, though somewhat less, to the differential evaluation of the job performance of the three CLI groups in this sample.

In the clerical female sample there was no statistically significant discrimination between the three CLI groups in terms of the performance evaluation dimensions. It is nevertheless of interest to note that the

performance scales having the highest coefficients include the first three among the males as well as Technical Knowledge, Job Knowledge, and Quality of Work. The similarities and differences between the males and females may be a clue regarding possible differential standards employed by supervisors in their ratings.

The total discriminatory power of the significant discriminant function for the Blue-Collar Males was 10%. Total discriminatory power may be interpreted as the percentage of variance in job performance explained by different CLI orientations (Tatsuoka, 1970). We conclude, therefore, that there is a statistically significant and moderate relationship between central life interests and individual job performance.

The mean scores on each performance evaluation scale for each central life interest group are shown in Table 2. The data in Table 2 are the group mean scores based on scales ranging in value from 1 to 5. It will be noted that the means for any given performance scale across both sexes and all CLI groups fall within a limited range. This undoubtedly results from the tendency of supervisors to fix most performance ratings at the average or middle category which would be a score of 3.

- - - - -

Insert Table 2 About Here

- - - - -

We shall focus on only the four aspects of performance identified by the discriminant analysis as mainly differentiating the three CLI groups among the blue-collar male workers.

Workers with distinctive CLI orientations received different ratings on four features of job performance. Among Blue-Collar Males, job-oriented

workers were rated highest of the three CLI groups on Initiative and Application, Cooperation, and Quantity of Work; and almost the lowest in Adaptability. Non-job-oriented workers were rated highest in Adaptability; lowest in Initiative and Application, and Cooperation; and almost the lowest in Quantity of Work. Workers with no preference in central life interests were rated midway between the other two CLI groups in Initiative and Application; about the same as job-oriented workers in Adaptability; and about the same as non-job-oriented in Cooperation and Quantity of Work.

We have established that the performance scale scores do not differentiate significantly among the three CLI groups of female clerical workers. Nevertheless it is interesting to note that the order of group means among the females is the same as males for the Adaptability, Initiative and Application, and the Cooperation performance scales. These are the three scales contributing most to the discrimination between the male CLI groups. In addition, the job-oriented females rate the lowest on Technical Knowledge and Job Knowledge, two additional scales that had high coefficients in the discriminant analysis for females.

Perhaps one of the more interesting findings is the uniformity among the group means for Quality of Work. Quality of Work has the least amount of difference in group means of any of the performance scales, the maximum difference being .05 for the males and .06 for the females.

An examination of Table 1 shows that there are three items which contribute very little to the discrimination among the groups. These items are Dependability, Physical Fitness, and Safety Performance. An interpretation of this finding is offered in the next section.

## Discussion

It is not surprising to find that the performance qualities of Initiative and Application, and Cooperation (which contribute importantly to distinguishing among the CLI groups) are ones on which job-oriented males are rated highest of the three CLI groups. If an individual had a central life interest in work, and his behavior followed his interest, these would be qualities of performance very likely to be exhibited and noted by supervisors.

It is more surprising however, to discover that on Adaptability, the job-oriented workers score lowest of the CLI groups. Dubin (1958) has suggested that commitment, with its high affective investment, is an obstacle to adaptability. Job-oriented workers are sometimes the most stubbornly conservative employees when it comes to technological change, or job changes in general (cf. Sayles, 1958). The supervisors in this telephone company seem to sense this conservatism among their job-oriented subordinates and rate them lowest on adaptability. It will also be noted that the non-job-oriented males have the highest rating on Adaptability. If such individuals have relatively low commitment they may also be relatively indifferent about the structuring of the environment which is the object of low commitment, and hence be adaptable to environmental changes. Relatively low adaptability may be one of the trade-offs for high employee commitment.

It is also surprising that Quality of Work does not turn out to distinguish among the groups compared. This may simply be accounted for by the facts that: (1) the telephone industry is one where the standard for minimally acceptable quality of work is very high since the equipment either works or does not, and when it does not, the negative feedback from customers is

certain and rapid; and (2) as a consequence, the company has built in extensive and effective quality controls that are relatively successful in policing quality of work performance.

Among the performance evaluation scales that contributed very little to the discriminant functions for both the males and females are Dependability, Physical Fitness, and Safety Performance. It may be possible that these items are included in the rating scheme in order to give the supervisor relatively easy and objective talking points with his employees when he discusses his annual ratings with each one. Dependability can be measured by tardy or absence records; Physical Fitness can be ascertained by illness records; and at least in the telephone company, detailed accident records are kept in a constant effort to improve Safety Performance.

Several tentative conclusions may be reached regarding the questions this study was designed to answer. Supervisors are oriented toward their employees in realistic ways and can detect and appropriately rate qualities displayed by workers that are in turn consistent with the workers' CLI outlook and its related behaviors. This ability of supervisors to make such distinctions occurs in spite of the fact that ratings employed in performance evaluation produce scores concentrated around the mid-point of the rating scale. Finally, it seems evident that some items of a performance evaluation system simply do not distinguish among employees in ways to make them particularly useful as performance measures, although these performance items may function in other capacities.

## References

- Cramer, E. M. and Bock, R. D. Multivariate analysis. Review of Educational Research. 1966. 36. 604-617.
- Dubin, Robert. Industrial Workers' worlds: A study of the 'Central Life Interests' of industrial workers. Social Problems. 1956. 3. 131-142.
- Dubin, Robert. The world of work: Industrial society and human relations. Englewood Cliff, N. J.: Prentice Hall. 1958.
- Dubin, Robert, Champoux, Joseph E., and Stampfl, John. Job satisfaction is related to central life interest. Technical Report 17. ONR Research Project. "Individual-Organizational Linkages". University of California, Irvine. 1973.
- Dubin, Robert and Champoux, Joseph E. Workers' central life interests and personality characteristics. Technical Report 20. ONR Research Project. "Individual-Organizational Linkages". University of California, Irvine. 1973.
- Overall, J. E. and Klett, C. J. Applied multivariate analysis. New York: McGraw-Hill. 1972.
- Sayles, Leonard R. Behavior of industrial work groups. New York: John Wiley & Sons. 1958.
- Tatsuoka, M. M. Discriminant analysis: The study of group differences. Champaign, Il.: Institute for Personality and Ability Testing. 1970.
- Weber, Max. The theory of social and economic organization. New York: Oxford University Press. 1947.

## Footnote

<sup>1</sup>This research was carried out under a contract from the Office of Naval Research (Contract No. N00014-69-A-0200-9001 NR 151-315)

Professor Champoux is now at the University of New Mexico.

Appreciation is express to John Stampfl for his computational and statistical contribution to this paper.

TABLE 1  
Standardized Discriminant Function Coefficients  
for Performance Evaluation Scales

Blue Collar Males		Clerical Females	
Performance Evaluation Scale	Discriminant Function Coefficients	Performance Evaluation Scale	Discriminant Function Coefficients
Adaptability	-1.11	Adaptability	1.02
Initiative and Application	.87	Technical Knowledge	.84
Cooperation	.62	Cooperation	.78
Quantity of Work	.28	Job Knowledge	.62
Technical Knowledge	-.18	Initiative and Application	-.49
Quality of Work	-.10	Quality of Work	-.40
Physical Fitness	-.09	Physical Fitness	-.22
Safety Performance	-.06	Dependability	.21
Job Knowledge	.05	Quantity of Work	.19
Dependability	.04	Safety Performance	-.10
Total Discriminatory Power <sup>1</sup>	10%	Total Discriminatory Power <sup>1</sup>	15%
Total Discriminable Variance <sup>2</sup>	36.50	Total Discriminable Variance <sup>2</sup>	21.06
d.f.	20	d.f.	20
	p<.02		n.s.
N	211	N	89

<sup>1</sup>Total discriminatory power was measured by the Omega Squared statistic described by Tatsuoaka (1970).

<sup>2</sup>The total discriminable variance computed by the procedure in Overall and Klett (1972, Ch. 10) is approximately distributed as a chi-square variate with degrees of freedom as noted.

TABLE 2  
Means for Each Performance Evaluation Scale  
By Central Life Interest Group

Performance Evaluation Scale	Blue-Collar Males			Clerical Females		
	NJ*	NP	JO	NJ	NP	JO
Adaptability	3.40	3.23	3.26	3.18	3.28	2.89
Initiative and Application	3.05	3.28	3.74	3.09	3.28	3.56
Cooperation	3.23	3.30	3.87	3.36	3.49	3.89
Quantity of Work	3.23	3.22	3.57	3.18	3.33	3.22
Technical Knowledge	3.48	3.33	3.57	3.36	3.33	3.00
Quality of Work	3.25	3.29	3.30	3.27	3.29	3.33
Physical Fitness	3.25	3.32	3.61	3.18	3.35	3.44
Safety Performance	3.15	3.11	3.39	3.36	3.43	3.56
Job Knowledge	3.50	3.34	3.57	3.36	3.33	3.22
Dependability	3.20	3.35	3.65	3.55	3.42	3.67
N	40	148	23	11	69	9

\*NJ = Non-job-oriented; NP = No preference; JO = Job-oriented.

DISTRIBUTION LIST

NAVY

- |    |   |   |  |
|----|---|---|--|
| 4  | Dr. Marshall J. Farr, Director<br>Personnel & Training Research Programs<br>Office of Naval Research<br>Arlington, VA 22217                   | 1 | LCDR Charles J. Thiesin, Jr., MSC, USN<br>4024<br>Naval Air Development Center<br>Warminster, PA 18974                                       |
| 1  | Director<br>ONR Branch Office<br>495 Summer Street<br>Boston, MA 02210<br>ATTN: C. M. Harsh   | 1 | Commander<br>Naval Air Reserve<br>Naval Air Station<br>Glenview, IL 60026  |
| 1  | Director<br>ONR Branch Office<br>1030 East Green Street<br>Pasadena, CA 91101<br>ATTN: E. E. Gloye  | 1 | Commander<br>Naval Air Systems Command<br>Department of the Navy<br>AIR-413C<br>Washington, DC 20360   |
| 1  | Director<br>ONR Branch Office<br>536 South Clark Street<br>Chicago, IL 60605<br>ATTN: M. A. Bertin  | 1 | Dr. Harold Booher<br>NAVAIR 415C<br>Naval Air Systems Command<br>5600 Columbia Pike<br>Falls Church, VA 22042                                |
| 6  | Director<br>Naval Research Laboratory<br>Code 2627<br>Washington, DC 20390  | 1 | CAPT John F. Riley, USN<br>Commanding Officer<br>U.S. Naval Amphibious School<br>Coronado, CA 92155  |
| 12 | Defense Documentation Center<br>Cameron Station, Building 5<br>5010 Duke Street<br>Alexandria, VA 22314                                       | 1 | Special Assistant for Manpower<br>OASN (M&RA)<br>The Pentagon, Room 4E794<br>Washington, DC 20350  |
| 1  | Chairman<br>Behavioral Science Department<br>Naval Command and Management Division<br>U. S. Naval Academy<br>Luce Hall<br>Annapolis, MD 21402 | 1 | Dr. Richard J. Niehaus<br>Office of Civilian Manpower Mgmt.<br>Code 06A<br>Department of the Navy<br>Washington, DC 20390                    |
| 1  | Chief of Naval Technical Training<br>Naval Air Station Memphis (75)<br>Millington, TN 38054<br>ATTN: Dr. G. D. Mayo                           | 1 | CDR Richard L. Martin, USN<br>COMFAIRMIRAMAR F-14<br>NAS Miramar, CA 92145   |
| 1  | Chief of Naval Training<br>Naval Air Station<br>Pensacola, FL 32508<br>ATTN: CAPT Allen E. McMichael  | 1 | Research Director, Code 06<br>Research and Evaluation Dept.<br>U.S. Naval Examining Center<br>Great Lakes, IL 60088<br>ATTN: C. S. Winiewicz |

- 1 Program Coordinator  
Bureau of Medicine & Surgery  
(Code 71G)  
Department of the Navy  
Washington, DC 20372
- 1 Commanding Officer  
Naval Medical Neuropsychiatric  
Research Unit  
San Diego, CA 92152
- 1 Technical Reference Library  
Naval Medical Research Institute  
National Naval Medical Center  
Bethesda, MD 20014
- 1 Chief  
Bureau of Medicine & Surgery  
Research Division (Code 713)  
Department of the Navy  
Washington, DC 20372
- 1 Dr. John J. Collins  
Chief of Naval Operations  
(OP-087F)  
Department of the Navy  
Washington, DC 20350
- 1 Technical Library (Pers-11B)  
Bureau of Naval Personnel  
Department of the Navy  
Washington, DC 20360
- 1 Head, Personnel Measurement Staff  
Capital Area Personnel Office  
Ballston Tower #2, Room 1204  
801 N. Randolph Street  
Arlington, VA 22203
- 1 Technical Director  
Naval Personnel Research and  
Development Center  
San Diego, CA 92152
- 1 Dr. Bernard Rimland  
Naval Personnel Research and  
Development Center  
San Diego, CA 92152
- 1 Commanding Officer  
Naval Personnel Research and  
and Development Center  
San Diego, CA 92152
- 1 Superintendent  
Naval Postgraduate School  
Monterey, CA 92940  
ATTN: Library (Code 2124)
- 1 Mr. George N. Graine  
Naval Ship Systems Command  
(SHIPS 03H)  
Department of the Navy  
Washington, DC 20360
- 1 Technical Library  
Naval Ship Systems Command  
National Center, Building 3  
Room 3S08  
Washington, DC 20360
- 1 Chief of Naval Training Support  
Code N-21  
Building 45  
Naval Air Station  
Pensacola, FL 32508
- 1 Dr. William L. Maloy  
Principal Civilian Advisor for  
Training and Education  
Naval Training Command, Code 01A  
Pensacola, FL 32508
- 1 CDR Fred Richardson  
Navy Recruiting Command  
BCT #3, Room 215  
Washington, DC 20370
- 1 Mr. Arnold Rubinstein  
Naval Material Command (NMAT-03424)  
Room 820, Crystal Plaza #6  
Washington, DC 20360
- ARMY
- 1 Commandant  
U.S. Army Institute of Administration  
ATTN: EA  
Fort Benjamin Harrison, IN 46216
- 1 Armed Forces Staff College  
Norfolk, VA 23511  
ATTN: Library
- 1 Director of Research  
U.S. Army Armor Human Research Unit  
ATTN: Library  
Building 2422 Morade Street  
Fort Knox, KY 40121

1 Commanding Officer,  
ATTN: LTC Montgomery  
USACDC - PASA  
Ft. Benjamin Harrison, IN 46249

1 Commandant  
United States Army Infantry School  
ATTN: ATSIN-H  
Fort Benning, GA 31905

1 U.S. Army Research Institute  
Commonwealth Building, Room 239  
1300 Wilson Boulevard  
Arlington, VA 22209  
ATTN: Dr. R. Dusek

1 Mr. Edmund F. Fuchs  
U.S. Army Research Institute  
1300 Wilson Boulevard  
Arlington, VA 22209

1 Dr. Stanley L. Cohen  
Work Unit Area Leader  
Organizational Development Work Unit  
Army Research Institute for  
Behavioral & Social Science  
1300 Wilson Boulevard  
Arlington, VA 22209

#### AIR FORCE

1 Headquarters, U.S. Air Force  
Chief, Personnel Research and  
Analysis Division (AF/DPSY)  
Washington, DC 20330

1 Research and Analysis Division  
AF/DPXYR Room 4C200  
Washington, DC 20330

1 AFHRL/MD  
701 Prince Street  
Room 200  
Alexandria, VA 22314

1 Personnel Research Division  
AFHRL  
Lackland Air Force Base  
Texas 78236

1 AFOSR(NL)  
1400 Wilson Boulevard  
Arlington, VA 22209

1 CAPT Jack Thorpe, USAF  
Department of Psychology  
Bowling Green State University  
Bowling Green, OH 43403

#### MARINE CORPS

1 COL George Caridakis  
Director, Office of Manpower Utilization  
Headquarters, Marine Corps (A01H)  
MCB  
Quantico, VA 22134

1 Dr. A. L. Slafkosky  
Scientific Advisor (Code Ax)  
Commandant of the Marine Corps  
Washington, DC 20380

1 Mr. E. A. Dover  
Manpower Measurement Unit  
(Code A01M-2)  
Arlington Annex, Room 2413  
Arlington, VA 20370

#### COAST GUARD

1 Mr. Joseph J. Cowan, Chief  
Psychological Research Branch (P-1)  
U.S. Coast Guard Headquarters  
400 Seventh Street, SW  
Washington, DC 20590

#### OTHER DOD

1 Lt. Col. Austin W. Kibler, Director  
Human Resources Research Office  
Advanced Research Projects Agency  
1400 Wilson Boulevard  
Arlington, VA 22209

1 Dr. Ralph R. Canter  
Director for Manpower Research  
Office of Secretary of Defense  
The Pentagon, Room 3C980  
Washington, DC 20301

#### OTHER GOVERNMENT

1 Dr. Lorraine D. Eyde  
Personnel Research & Development Center  
U.S. Civil Service Commission, Room 3458  
1900 E. Street, N.W.  
Washington, DC 20415

1 Dr. Very Urry  
Personnel Research & Development  
Center  
U.S. Civil Service Commission  
Washington, DC 20415

1 Dr. Edwin A. Fleishman  
American Institutes for Research  
8555 Sixteenth Street  
Silver Spring, MD 20910

MISCELLANEOUS

1 Dr. Richard C. Atkinson  
Stanford University  
Department of Psychology  
Stanford, CA 94305

1 Mr. Paul Foley  
Naval Personnel R&D Laboratory  
Washington Navy Yard  
Washington, DC 20374

1 Dr. Bernard M. Bass  
University of Rochester  
Management Research Center  
Rochester, NY 14627

1 Dr. Albert S. Glickman  
American Institutes for Research  
8555 Sixteenth Street  
Silver Spring, MD 20910

1 Mr. Michael W. Brown  
Operations Research, INC.  
1400 Spring Street  
Silver Spring, MD 20910

1 Dr. Duncan N. Hansen  
Florida State University  
Center for Computer-Assisted Instruction  
Tallahassee, FL 32306

1 Century Research Corporation  
4113 Lee Highway  
Arlington, VA 22207

1 Dr. Richard S. Hatch  
Decision Systems Associates, Inc.  
11428 Rockville Pike  
Rockville, MD 20852

1 Dr. Kenneth E. Clark  
University of Rochester  
College of Arts and Sciences  
River Campus Station  
Rochester, NY 14627

1 Dr. M.D. Havron  
Human Sciences Research, Inc.  
Westgate Industrial Park  
7710 Old Springhouse Road  
McLean, VA 22101

1 Dr. Rene' V. Dawis  
University of Minnesota  
Department of Psychology  
Minneapolis, MN 55455

1 Human Resources Research Organization  
Division #3  
P.O. Box 5787  
Presidio of Monterey, CA 93940

1 Dr. Marvin D. Dunnette  
University of Minnesota  
Department of Psychology  
N492 Elliott Hall  
Minneapolis, MN 55455

1 Human Resources Research Organization  
Division #4, Infantry  
P.O. Box 2086  
Fort Benning, GA 31905

2 ERIC  
Processing and Reference Facility  
4833 Rugby Avenue  
Bethesda, MD 20014

1 Human Resources Research Organization  
Division #5, Air Defense  
P.O. Box 6057  
Fort Bliss, TX 79916

1 Dr. Victor Fields  
Department of Psychology  
Montgomery College  
Rockville, MD 20850

1 Human Resources Research Organization  
Division #6, Library  
P.O. Box 428  
Fort Rucker, AL 36360

1 Dr. Lawrence B. Johnson  
Lawrence Johnson and Associates, Inc.  
200 S Street, N.W., Suite 502  
Washington, DC 20009

- 1 Dr. Norman J. Johnson  
Carnegie-Mellon University  
School of Urban and Public Affairs  
Pittsburgh, PA 15213
- 1 Dr. E. J. McCormick  
Purdue University  
Department of Psychological Sciences  
Lafayette, IN 47907
- 1 Dr. Robert R. Mackie  
Human Factors Research, Inc.  
6780 Cortona Drive  
Santa Barbara Research Park  
Goleta, CA 93017
- 1 Mr. Edmund Marks  
109 Grange Building  
Pennsylvania State University  
University Park, PA 16802
- 1 Mr. Luigi Petrullo  
2431 North Edgewood Street  
Arlington, VA 22207
- 1 Dr. Robert Pritchard  
Assistant Professor of Psychology  
Purdue University  
Lafayette, IN 47907
- 1 Dr. Joseph W. Rigney  
Behavioral Technology Laboratories  
University of Southern California  
3717 South Grand  
Los Angeles, CA 90007
- 1 Dr. Leonard L. Rosenbaum, Chairman  
Department of Psychology  
Montgomery College  
Rockville, MD 20850
- 1 Dr. Benjamin Schneider  
University of Maryland  
Department of Psychology  
College Park, MD 20742
- 1 Dr. Arthur I. Siegel  
Applied Psychological Services  
Science Center  
404 East Lancaster Avenue  
Wayne, PA 19087
- 1 Mr. Emanuel P. Somer, Head  
Naval Personnel Research and  
Development Center  
San Diego, CA 92152
- 1 Dr. David J. Weiss  
University of Minnesota  
Department of Psychology  
Minneapolis, MN 55455
- 1 Dr. Anita West  
Denver Research Institute  
University of Denver  
Denver, CO 80210
- 1 Dr. Charles A. Ullmann  
Director, Behavioral Science Studies  
Information Concepts Incorporated  
1701 No. Ft. Myer Drive  
Arlington, VA 22209